ABSTRACT

A method for providing high connectivity communications over a Time Division Multiplexed (TDM) and Wavelength Division Multiplexed (WDM) packet-switched optical ring network having a plurality of nodes connected thereto comprises the steps of creating, at one of the plurality of nodes, a composite packet, dropping a composite packet being routed over the packet-switched optical ring network destined for one of a plurality of nodes of the packet-switched optical ring network from the packet-switched optical ring network, adding the composite packet created by one of the plurality of nodes into the packet-switched optical ring network and routing the photonic time slot comprising the composite packet to a destination node. The composite packet to be added may be added to a vacant or empty photonic time slot. The dropping of a composite packet from the packet-switched optical ring network and the adding of a composite packet to the packet-switched optical ring network may be accomplished simultaneously.

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